3.1 EXISTING CONDITIONS

REGIONAL DRAINS

Regional drains include:

Los Angeles River: The Los Angeles River located in the western portion of Long Beach is the largest regional drain flowing through the City. The river enters Long Beach at the far northern boundary and flows south to the Harbor. The river has a natural bottom with riprap side slopes south of 25th Street and a concrete lining north of 25th Street. There are fifteen pump stations that outfall into this regional drain.

San Gabriel River: The San Gabriel River, located in the eastern portion of Long Beach, flows from north to south and outlets into Long Beach Harbor. The river is concrete lined and accepts runoff from one pump station in Long Beach.

Coyote Creek: Coyote Creek flows from northeast to southwest and passes through a small portion of Long Beach before it outlets into the San Gabriel River. The creek is concrete lined and accepts runoff from three small pump stations.

Los Cerritos Channel: Los Cerritos Channel originates in Long Beach just east of the airport, flows east and then turns south and outlets into the Marine Stadium.

Heather Channel: Heather Channel enters Long Beach from the City of Lakewood and outfalls into the Los Cerritos Channel.

Los Cerritos Line E: Los Cerritos Line E runs along Palo Verde Avenue and Los Coyotes Diagonal. It enters Long Beach from the City of Lakewood and outfalls into Los Cerritos Channel.

Artesia-Norwalk Drain: Artesia-Norwalk Drain enters Long Beach from Hawaiian Gardens and outfalls into Coyote Creek.

BASIN BOUNDARIES

The City of Long Beach was divided into 30 major drainage basins. Within each major basin there are sub-basins for major drains 36 inches in diameter or larger that have their outfall to a regional drain, regional retention basin or the Harbor. Many major basins contain two or more sub-basins. The sub-basins are further sub-divided into drainage areas contributing runoff to a drainage node.

BASIN DESCRIPTIONS

This section provides a brief description of each of the 30 major drainage basins.

Basin 01

Basin 01 is 456 acres and is made up of 393 acres residential, 44 acres commercial, 7 acres institutional and 12 acres of open space. The basin is located in the southern portion of Long Beach along the coast and is bound on the north, south, east and west by 4th Street, Ocean Boulevard, Bennett Avenue and Junipero Avenue, respectively.

The drainage pattern is from north to south. There are four major storm drain systems that all outfall into the Harbor at Molino Avenue, Redondo Avenue, 36th Place and 39th Place. Three of the outlets are located on the south side of the bluff just south of Ocean Boulevard and one outlet is located just south of a beach walkway wall. All flows from the outlets reach the Harbor in channels graded in the beach sand.

Basin 02

Basin 02 is 1,276 acres and is made up of 905 acres residential, 287 acres commercial, 22 acres industrial, 59 acres institutional and 3 acres of open space. It Is located in the south central portion of Long Beach with the extreme northern portion of the area being within the City of Signal Hill. The basin is bound on the north, south, east and west by Hill Street, 3rd Street, Grand Avenue and the L. A. River, respectively.

The drainage pattern is from east to west. There is one major storm drain system that has 11 major storm drain lines contributing runoff. One of the storm drain lines contributing to the main system is a pressure line that serves as an outfall from the Hamilton Bowl. The system outfalls into the L. A. River at 10th Street through four 78 inch diameter RCP's.

Basin 03

Basin 03 Is 1,083 acres and is made up of 367 acres residential, 642 acres commercial, 7 acres industrial, 58 acres institutional and 9 acres of open space. It is located in the

southwestern portion of Long Beach and includes most of the downtown area. It Is bound on the north, south, east and west by 10th Street, Shoreline Drive, Kennebec Avenue and the L. A. River, respectively.

The drainage pattern is from east to west. There are three major storm drain systems that have a total of ten major lines contributing runoff. All three systems outfall to the L. A. River, two by pumping and one by gravity at 3rd Street. The first pump station at 6th Street, is owned by the City and has a maximum operating capacity of 109 cfs. The second pump station, south of Shoreline Drive is the Seaside Station. It is owned by the County and has a maximum operating capacity of 221 cfs.

Sub-basin 0302 consists of two separate basins that do not border each other but are connected by a 36 inch diameter RCP at the intersection of Maine Avenue and 3rd Street. There is a split flow at Magnolia Avenue and 8th Street that diverts flow in an 18 inch diameter RCP into sub-basin 0301 and a 16 inch diameter RCP into sub-basin 0302.

Basin 04

Basin 04 is 810 acres and is made up of 426 acres residential, 176 acres commercial, 140 acres industrial, 56 acres institutional and 12 acres of open space. It is located in the southwestern portion of Long Beach just east of the L. A. River and is bound on the north, south, east and west by Hill Street, 10th Street, Orange Avenue and the L. A. River, respectively.

The drainage pattern is from east to west. There are two major storm drain systems that have a total of four major lines contributing runoff. One of the major systems originates in one of two pump stations that drain the Hamilton Bowl. This system outfalls into the L. A. River through a pump station located between 10th Street and 11th Street. The other major system outfalls into the L. A. River just north of 16th Street through a pump station.

The pump station located between 10th Street and 11th Street is the Cerritos Station. It is owned by the County and has a maximum operating capacity of 117 cfs. The pump station located just north of 16th Street is the San Francisco Station. It is owned by the City of Long Beach and has a maximum operating capacity of 240 cfs.

Basin 0402 consists of three separate basins that do not border each other. They are connected by a 48 inch diameter RCP that originates at the Hamilton Bowl. The drain in 16th Street from Linden Avenue to Pacific Avenue decreases in size downstream at two locations from a 39 inch diameter to a 27 inch diameter and from a 30 inch diameter to a 24 inch diameter.

Basin 05

Basin 05 is 546 acres and is made up of 434 acres residential, 97 acres commercial, 13 acres institutional and 2 acres of open space. It is located in the west central portion of Long Beach just east of the L. A. River with the extreme northeastern portion being within the City of Signal Hill. The basin is bound on the north, south, east and west by Patterson Street, Rhea Street, Lewis Avenue and the L. A. River, respectively.

The drainage pattern is from east to west. There is one major storm drain system with six major lines contributing runoff. The system outfalls into the L. A. River through the Hill Street pump station which is owned by the County and has a maximum operating capacity of 400 cfs. There are three places where split flows occur: 1) at 21st Street and Atlantic Avenue; 2) 25th Street and Long Beach Boulevard and; 3) at Burnett Street and Chestnut Avenue.

Basin 06

Basin 06 is 695 acres and is made up of 475 acres residential, 125 acres commercial, 73 acres institutional and 17 acres of open space. It is located in the west central portion of Long Beach just east of the L. A. River. The extreme eastern portion of the basin lies within the City of Signal Hill. It is bound on the north, south, east and west by West Wardlow, Eagle Street, California Avenue and the L. A. River, respectively.

The drainage pattern is to the south and southeast. There are two major storm drain systems that have a total of five major lines contributing runoff. One major system drains the western portion of the basin and the other the eastern portion. The two systems converge at San Francisco Avenue just north of Willow Street and outfall into the L. A. River through the Willow Pump Station. This station is owned by the City of Long Beach and has a maximum operating capacity of 466 cfs. There is a split flow at 25th Street and Long Beach Boulevard, a 48 inch pipe that remains in Basin 06 and a 36 inch pipe that takes flow into Basin 05.

Basin 07

Basin 07 is 1,029 acres and is made up of 858 acres residential, 89 acres commercial, 11 acres industrial, 53 acres institutional and 18 acres of open space. The basin is located in the

southwest central portion of Long Beach and is bound on the north, south, east and west by 27th Street, 10th Street, Temple Avenue and Olive Avenue, respectively. Almost half of the basin lies within the City of Signal Hill.

The drainage pattern is to the center of the basin converging at the Hamilton Bowl Reservoir located northeast of the corner of Pacific Coast Highway and Walnut Avenue. There are six major storm drain systems contributing runoff to the Hamilton Bowl Reservoir. The reservoir is drained by two pump stations owned by the County.

The West Hamilton Bowl Pump Station has a maximum operating capacity of 4.5 cfs. The outlet is a 48 inch RCP that heads west to become the main storm drain line for sub-basin 0402. The South Hamilton Bowl Pump Station has a maximum operating capacity of 300 cfs. The outlet pipe from this station is a 75 inch RCP pressure line that heads south on Gaviota Avenue until it connects to the main storm drain line for Basin 02.

Basin 08

Basin 08 is 248 acres and is made up of 163 acres residential, 27 acres commercial, and 58 acres industrial. Most of the basin is located within the City of Signal Hill. The basin is located in the west central portion of Long Beach and is bound on the north, south, east and west by 33rd Street, 25th Street, St. Louis Avenue and Lime Avenue, respectively.

The drainage pattern is from east to west. There is one major storm drain system that has two major lines contributing runoff. The system outfalls into the California Bowl Reservoir. Storm runoff is drained from the reservoir by a 240 CIP and a 54 inch RCP. The 240 CIP outlet heads west to join the drain system for Basin 06. The 54 inch RCP outlet heads west on 27th Street and becomes a pressure line at Pasadena Avenue. The line finally outfalls into the L. A. River.

Basin 09

Basin 09 is 399 acres and is made up of 295 acres residential, 91 acres commercial, 12 acres institutional and 1 acre of open space. The San Diego Freeway comprises a substantial portion of the drainage area and a small portion of the extreme eastern edge of the basin lies within the City of Signal Hill. Basin 09 is located in the west central portion of Long Beach east of the L. A. River and is bound on the north, south, east and west by Stewart Way, Spring Street, Olive Avenue and the L. A. River, respectively.

The drainage pattern is to the southwest and northwest. There is one major storm drain system that has one major line contributing runoff. The system outfalls into the L. A. River at 34th Street. Along Pepper Drive, the storm drain system exits the basin but does not collect runoff before re-entering the basin.

Basin 10

Basin 10 is 416 acres and is made up of 16 acres residential, 49 acres commercial and 351 acres industrial. It is located in the southwestern corner of Long Beach on the west side of the L. A. River. The basin is bound on the north, south, east and west by Pacific Coast Highway, 8th Street, the L. A. River and the Terminal Island Freeway, respectively.

The drainage pattern is to the south and east. There are three major storm drain systems that have a total of seven major lines contributing runoff. All three systems outfall through pump stations to either the L. A. River or the Cerritos Channel.

Cowles Street Station outfalls into the L. A. River at Cowles Street. It is owned by the City and has a maximum operating capacity of 173 cfs. The West Long Beach Station outfalls into the Cerritos Channel at Harbor Avenue. It is owned by the County and has a maximum operating capacity of 165 cfs. The West 8th Street Station outfalls into the Cerritos Channel at Santa Fe Avenue. The station is owned by the City and has a maximum operating capacity of 175 cfs.

Basin 11

Basin 11 is 424 acres and is made up of 338 acres residential, 64 acres commercial, 3 acres industrial, 18 acres institutional and 1 acre of open space. The basin is located in the southwestern portion of Long Beach west of the L. A. River and is bound on the north, south, east and west by Willow Street, 17th Street, the L. A. River and Webster Avenue, respectively.

The drainage pattern is to the south and east. There is one major storm drain system that has four major storm drain lines contributing runoff. The system outfalls into the L. A. River at 19th Street through the 19th Street Station. This station is owned by the City and has a maximum operating capacity of 143 cfs.

Basin 12

Basin 12 is 719 acres and is made up of 556 acres residential, 98 acres commercial, 9 acres

industrial, 41 acres institutional and 15 acres open space. It is located in the west central portion of Long Beach and is bound on the north, south, east and west by the San Diego Freeway, Willow Street, the L. A. River and the railroad, respectively.

The drainage pattern is to the south and east. There is one major storm drain system that has four major storm drain lines contributing runoff. The system outfalls into the L. A. River through the 27th Street Pump Station. This station is owned by the City and has a maximum operating capacity of 236 cfs.

Basin 13

Basin 13 is 84 acres and is made up of 7 acres commercial and 77 acres industrial. It is located in the west central portion of Long Beach west of the L. A. River and is bound on the north, south, east and west by Dominguez Street, Carson Street, the L. A . River and the Union Pacific Railroad, respectively.

The drainage pattern is to the south and east with one major storm drain system that outfalls into the Dominguez Retention Basin. The Dominguez Basin drains to the L. A. River through the Dominguez Pump Station which has a maximum operating capacity of 25 cfs.

Basin 14

Basin 14 is 3,374 acres and is made up of 2,445 acres residential, 392 acres commercial, 148 acres industrial, 273 acres institutional and 116 acres of open space. The basin is located in the northwestern portion of Long Beach just east of the L. A. River and is bound on the north, south, east and west by Artesia Boulevard, Roosevelt Road, the railroad and the L. A. River, respectively. A small area to the east of the basin lies within the City of Lakewood.

The drainage pattern is to the south and west. There are two main storm drain systems that have a total of 21 major storm drain lines contributing runoff. Both systems outfall into the County's Dominguez Gap Retention Basin that runs along the east side of the L. A. River from the San Diego Freeway to 59th Street. The retention basin is drained by the Dominguez Gap Pump Station which has a maximum capacity of 586 cfs. There is a split flow at 59th Street and Walnut Avenue that brings a 48 inch RCP into sub-basin 1401 and a 48 inch RCP into sub-basin 1402.

Basin 15

Basin 15 is 958 acres and is made up of 569 acres residential, 167 acres commercial, 197 acres industrial and 25 acres institutional. It is located in the northwestern portion of Long Beach and is bound on the north, south, east and west by Alondra Boulevard, Artesia Boulevard, Obispo Avenue and the L. A. River, respectively.
The drainage pattern is to the south and west and there is one major storm drain system that has seven major storm drain lines contributing runoff. The system outfalls into the L. A. River at Artesia Boulevard through the North Boundary pump station. This station is owned by the City and has a maximum operating capacity of 590 cfs.

Basin 16

Basin 16 is 194 acres and is made up of 113 acres residential, 61 acres commercial, 8 acres industrial, 5 acres institutional and 7 acres of open space. It is located in the northwestern corner of Long Beach on the west side of the L. A. River and Is bound on the north, south, east and west by Artesia Boulevard, Victoria Street, the L. A. River and Susana Road, respectively. A small portion of the northwestern corner of the basin lies within the City of Compton.

The drainage pattern is from north to south. There are three major storm drain systems. Two systems drain the western portion of the basin and one major storm drain system drains the eastern portion of the basin. The systems converge just south of Gordon Street and east of Long Beach Boulevard and outfalls into the L. A. River through the Gordon Pump Station. This station is owned by the City and has a maximum operating capacity of 173 cfs.

Basin 17

Basin 17 is 317 acres and is made up of 244 acres residential, 68 acres commercial and 5 acres institutional. It is located in the northwestern corner of Long Beach just west of the L. A. River and is bound on the north, south, east and west by Caldwell Street, Artesia Boulevard, the L. A. River and Long Beach Boulevard, respectively. A portion of the northern part of the basin lies within the City of Compton.

The drainage pattern is to the south and east. There is one major storm drain system that has one major line contributing runoff. The system converges at Coachella Avenue and Cummings Lane and drains a portion of the Long Beach Freeway before it outfalls to the L. A. River through the Artesia Pump Station. This station is owned by the City and has a maximum operating capacity of 287 cfs.

Basin 18

Basin 18 Is 1,814 acres and is made up of 804 acres residential, 262 acres commercial, 729 acres industrial and 19 acres institutional. It is located in the central portion of Long Beach and is generally bound on the north, south, east and west by 37th Street, 19th Street, Lakewood Boulevard and Elm Avenue, respectively. The basin includes the entire airport, an area in the City of Signal Hill and a small section in the City of Lakewood.

The drainage pattern is to the east. There are three major storm drain systems that have a total of 13 major storm drain lines. The systems converge just west of the intersection of Spring Street and Lakewood Boulevard at which point they form the Los Cerritos Channel.

Basin 19

Basin 19 is 3,898 acres and is made up of 2,475 acres residential, 610 acres commercial, 439 acres industrial, 228 acres institutional and 146 acres of open space. It is located in the north central portion of Long Beach and consists of two locations separated by the City of Lakewood.

Northern Section

The northern section (sub-basins I through 3) is located in the north central corner of Long Beach. It is bound on the north, south, east and west by Jackson Street, Candlewood Street, Downey Avenue and the Union Pacific Railroad, respectively. The extreme northern portion of the basin lies within the City of Paramount and a small portion of the southeastern corner of the basin lies within the City of Lakewood.

The drainage pattern is to the south and east. There are three major storm drain systems that have one major line contributing runoff. Two of the major systems outfall into a box culvert that runs south on Downey Avenue into the City of Lakewood. The third major system continues south on Paramount Boulevard in a 66 inch RCP into the City of Lakewood.

Southern Section

The southern section (sub-basins 4 through 20) is located in the north central portion of Long Beach and is bound on the north, south, east and west by Del Amo Boulevard, Spring Street,

Woodruff Avenue and Locust Avenue, respectively. A portion of the north central and northeastern sections of the basin lies within the City of Lakewood.

The drainage pattern is to the south and east. There are 17 major storm drain systems and one of the major systems has 13 major lines contributing runoff. Twelve of the major systems outfall into the Heather Drainage Channel. The channel runs south from Del Amo Boulevard to Carson Street just west of Heather Road and south from Carson Street to the Los Cerritos Channel between Charlemagne Avenue and Rutgers Avenue. The remaining five major systems outfall into the Los Cerritos Channel. There is one split flow just west of the intersection of Conant Street and Lakewood Boulevard. The split flow goes to 36 inch and 42 inch pipes.

Basin 20

Basin 20 is 2,259 acres and is made up of 1,215 acres residential, 412 acres commercial, 70 acres industrial, 492 acres institutional and 70 acres of open space. It is located in the east central portion of Long Beach and is bound on the north, south, east and west by Spring Street, 8th Avenue, the Los Cerritos Channel and Redondo Avenue, respectively. The southeastern corner of the basin lies within the California State University Campus.

The drainage pattern is to the south and east. There is one major storm drain system that has 15 major lines contributing runoff. The major system becomes Bouton Creek and outfalls into the Los Cerritos Channel. There is one split flow at the Los Coyotes Diagonal just east of Clark Avenue. The split flow goes to 2-48 inch RCP's.

Basin 21

Basin 21 is 1,172 acres and is made up of 773 acres residential, 125 acres commercial, 55 acres institutional and 219 acres of open space. It Is located in the south central portion of Long Beach and is bound on the north, south, east and west by Pacific Coast Highway, Broadway, Bellflower Boulevard and Coronado Avenue, respectively.

The drainage pattern is to the south and east. There are five major storm drain systems that have a total of three major lines contributing runoff. Four of the major systems outfall into the Colorado Lagoon and the fifth major system outfalls into the Marine Stadium. There are four places where split flows occur:

1 . At 11th Street and Roswell Avenue, the split goes to a 36 inch semi-elliptical pipe and a 4 foot 3 inch by 4 foot 0 inch double RCB.

2. On Roswell Avenue between 10th and 11th Street, the split goes to a 30 inch RCP and a 54 inch RCP.

3. On 10th Street just east of Roswell Avenue, the split goes to a 15 inch RCP and a 48 inch semi-elliptical pipe.
4. On Bennett Avenue between 3rd and Vista Streets, the split goes to a 14 inch RCP and a 24 inch RCP.

Basin 22

Basin 22 Is 520 acres and is made up of 38 acres residential, 428 acres commercial and 54 acres institutional. It is located in the southeastern corner of Long Beach and is bound on the north, south, east and west by Bouton Creek, San Gabriel River, Los Cerritos Channel and Havana Avenue, respectively.

The drainage pattern is in different directions dependent on the location within the basin. There are nine major storm drain systems that have a total of three major lines contributing runoff. Four of the major systems outfall into the Los Cerritos Channel, four more outfall into the Marina and the ninth outfalls into a retention pond.

Basin 23

Basin 23 is 213 acres and is made up of 110 acres residential, 85 acres commercial, 14 acres institutional and 4 acres of open space. It is located in the southeastern portion of Long Beach and is bound on the north, south, east and west by Colorado Street, Division Street, Ultimo Avenue and Belmont Avenue, respectively.

The drainage pattern is to the south. There are two major storm drain systems with one having two major storm drain lines contributing runoff. The systems converge just west of the intersection of Claremont Avenue and outfalls through the Belmont Pump Station into Alamitos Bay. The pump station is owned by the County and has a maximum operating capacity of 380 cfs. There is one split flow at Claremont Avenue and Broadway. The split goes to 2-30 inch RCP's with one pipe leaving the basin.

Basin 24

Basin 24 is 281 acres and is made up of 188 acres residential, 30 acres commercial and 63 acres of open space. It is located in the southeastern portion of Long Beach and is bound on the north, south, east and west by Second Street, Ocean Boulevard, 72nd Place and Grand Avenue, respectively.

The drainage pattern is to the southeast and northwest converging just east of the intersection of 54th Place and Ocean Boulevard. There are two major storm drain systems. The first drains the eastern portion of the basin and the second drains the western portion. Runoff outfalls through the Alamitos Bay Pump Station to Alamitos Bay. The station is owned by the County and has a maximum capacity of 180 cfs.

Basin 25

Basin 25 is 90 acres and is made up of 70 acres residential, 9 acres commercial, 4 acres institutional and 7 acres of open space. It is located on Naples Island in the southeastern portion of Long Beach and is bound by Alamitos Bay and the Marine Stadium and by Toledo Street on the south.

The drainage pattern for sub-basin 2501 is to the west converging at the Naples Pump Station located north of the intersection of Sorrento Drive and 2nd Street. The pump station is owned by the County and has a maximum operating capacity of 48 cfs. Sub-basin 2502 drains to the east converging at the Appian Way pump station located east of Appian Way and 2nd Street. This station is also owned by the County and has a maximum operating capacity of 85 cfs.

Basin 26

Basin 26 is 355 acres and is made up of 304 acres residential, 22 acres commercial and 29 acres of institutional. It is located in the east central portion of Long Beach and is bound on the north, south, east and west by Spring Street, Lees Avenue, San Gabriel River and the Los Cerritos Channel, respectively.

The drainage pattern is to the south and west. There are three major storm drain systems that outfall into the Los Cerritos Channel.

Basin 27

Basin 27 is 1,083 acres and is made up of 825 acres residential, 109 acres commercial, 143 acres of institutional and 6 acres of open space. It is located in the east central portion of Long Beach and is bound on the north, south, east and west by Spring Street, Rendina Street, the San Gabriel River and Bellflower Boulevard, respectively.

The drainage pattern is to the east and south on the west side of the Los Cerritos Channel and to the west and south on the east side. There are eight major storm drain systems with a total of three major storm drain lines contributing runoff. All eight major systems outfall into the Los Cerritos Channel.

Basin 28

Basin 28 is 630 acres and is made up of 386 acres residential, 179 acres commercial and 65 acres institutional. It is located in the eastern portion of Long Beach just west of the San Gabriel River and is bound on the north, south, east and west by Carson Street, Spring Street, the San Gabriel River and Snowden Avenue, respectively.

The drainage pattern is to the south and east converging at the El Dorado Pump Station located south of the intersection of Spring Street and the San Gabriel River. The station is owned by the County and has a maximum operating capacity of 535 cfs.

Basin 29

Basin 29 Is 727 acres and is made up of 633 acres residential, 10 acres commercial, 26 acres institutional and 58 acres of open space. It is located in the northeastern portion of Long Beach and is bound on the north, south, east and west by Del Amo Boulevard, Spring Street, the San Gabriel River and San Anseline Avenue, respectively.

The drainage pattern is to the south. There are eight major storm drain systems that outfall into the open channel that runs south along Palo Verde Avenue and the Los Coyotes Diagonal.

Basin 30

Basin 30 is 546 acres and is made up of 508 acres residential, 19 acres commercial and 19 acres institutional. It is located in the northeastern corner of Long Beach and is bound on the

north, south, east and west by Carson Street, Spring Street, Bloomfield Avenue and the San Gabriel River Freeway.

The drainage pattern is to the southwest except for one sub-basin which is to the southeast. There are seven major storm drain systems. Two of the systems outfall into Coyote Creek, two outfall into the Artesia Norwalk Drain and three outfall into the open channel that runs south along the west side of the San Gabriel Freeway.

MAJOR STORM DRAINS

Major storm drain alignments were obtained from the Storm Drain Maps provided by the City of Long Beach. These maps contain the sizes of drains, manhole and catch basin locations, right-of-way widths, storm drain ownership and drawing file numbers for the storm drain design and/or construction drawings.

Storm Drain Ownership

Storm drains within the City of Long Beach are managed by either the City or the County of Los Angeles Public Works Department (County).

Planned or Recently Constructed Projects

A list of the County Storm Drain Bond Issue Projects for the 1958, 1964 and 1970 programs were obtained from the City of Long Beach. This list contains projects that are in the planning stage, design stage, construction stage or have already been built. Because of the uncertainty as to if and when projects that are in the planning or design stage will be built, only those projects that are under construction or have already been built were included in the existing conditions analysis.

Recently built projects or projects under construction include:

1. Basin 08 - Walnut Spring Drain: Runs from Walnut Avenue and 28th Street to the California Bowl.

2. Basin 10 - Project C-5150: Drains from 16th Street and Hayes Avenue to the pump station on Cowles Avenue and the L. A. River.

3. Basin 19 - Project 5154, Unit 6 Line A: Drains in San Anseline Avenue from Monlaco Road to the Los Cerritos Channel.

STORAGE BASINS

There are five storm water storage basins in Long Beach:

Dominguez Basin: Dominguez Basin is located on the west side of the L. A. River. The basin is approximately a 1/2 mile long by 200 feet wide and is drained by pumping to the L. A. River.

Dominguez Gap Basin: Dominguez Gap Basin is located along the east side of the L. A. River from 59th Street south to the San Diego Freeway. The basin is approximately 2.5 miles long by 250 feet wide and is drained by pumping to the L. A. River.

California Bowl: California Bowl is located southwest of the intersection of Spring Street and Orange Avenue. The bowl is about 200 feet by 200 feet, has a storage capacity of approximately 18 acre-feet and is drained by a 54 inch diameter pipe to the L. A. River.

Hamilton Bowl: Hamilton Bowl is located northeast of the corner of Pacific Coast Highway and Walnut Avenue. The reservoir is approximately 1200 feet long by 800 feet wide, has a storage capacity of approximately 160 acre-feet and is drained by pumping to a gravity outfall.

Colorado Lagoon: Colorado Lagoon is located in the recreation park northwest of the intersection of Colorado Street and Monrovia Avenue. The lagoon is approximately 2,500 feet long by 200 feet wide. It drains into the Marine Stadium through an 8 foot by 12 foot box culvert.

PUMP STATIONS

There are over 40 storm water pump stations in Long Beach. Most of the larger capacity stations outfall to the L. A. River.

Table Pump Stations

ID	Station Name	Ownership	Capacity (cfs)
030222	SEASIDE	COUNTY	221
030309	6TH STREET	CITY	109
040125	SAN FRANCISCO	CITY	240
040211	CERRITOS	COUNTY	117
050144	HILL STREET	COUNTY	400

060141	WILLOW	CITY	466
100117	WEST 8TH STREET	CITY	175
100216	WEST LONG BEACH	COUNTY	165
100315	COWLES	CITY	173
110128	19TH STREET	CITY	143
120140	27TH STREET	CITY	236
150141	NORTH BOUNDARY	CITY	590
160116	GORDON	CITY	173
170111	ARTESIA	CITY	287
191601	LAKEWOOD TUNNEL	CITY	26
230124	BELMONT	COUNTY	380
240117	ALAMITOS BAY	COUNTY	180
250103	NAPLES	COUNTY	48
250207	APPIAN WAY	COUNTY	85
260120	LOS ALTOS	COUNTY	244
280122	EL DORADO	COUNTY	535
300202	EAST WARDLOW NORTH	CITY	48
300303	IMPERIAL	CITY	115
300402	COUNTRY SQUARE	LB	-NA-
300502	EAST WARDLOW SOUTH	CITY	55

LAND USE

Land Use Maps were prepared from Zoning Maps furnished by the City.

Table 2-2 Land Use Summary

Basin	Residential	Commercial	Industrial	Institutional	Open-Space	Total
	Land Use Categories					
	R1S, R1N, R1L R2S, R21, R2N R2L, R33, R34 R3L, R3T, R4H R4N, R4R, RS RM	PD1, PD2, CL CR, CB, CO CH, CN, CT CS, PR. HR	MC ML, MG MR, MP	I	P, H	
	Basin Land Use (Acres)					
01	393	44	0	7	12	456
02	905	287	22	59	3	1,276
03	367	642	7	58	9	1,083
04	426	176	140	56	12	810
05	434	97	0	13	2	546
06	475	125	0	78	17	695
07	858	89	11	53	18	1,029
08	163	27	58	0	0	248
09	295	91	0	12	1	399
10	16	49	351	0	0	416
11	338	64	3	18	1	424
12	556	98	9	41	15	719
13	0	7	77	0	0	84
14	2,445	392	148	273	116	3,374
15	569	167	197	25	0	958
16	113	61	8	5	7	194
17	244	68	0	5	0	317
18	804	262	729	19	0	1,814
19	2,475	610	439	228	146	3,898
20	1,215	412	70	492	70	2,259
21	773	125	0	55	219	1,172
22	38	428	0	54	0	520
23	110	85	0	14	4	213
24	188	30	0	0	63	281
25	70	9	0	4	7	90
26	304	22	0	29	0	355
27	825	109	0	143	6	1,083
28	386	179	0	65	0	630
29	633	10	0	26	58	727
30	508	19	0	19	0	546

TOTAL	16,926	4,784	2,269	1,851	786	26,616